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Effectiveness of Implementing DIR/Floortime Principles to Improve Expressive Language of 2-years-old Child with Language Delay: A Coaching Approach for Mother

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Abstract
This research aims to review the effectiveness of coaching approaches for mothers by implementing the DIR/Floortime principles to improve expressive language in a 2-year-old child with language delay. This intervention consists of three components: 1) Developmental (D); 2) Individual Difference (I); 3) Relationship Based (R). The research design is Small-N Design in a single case with one participant: the boy with a language delay and his mother. The measurement methods used were observation and interview based on the Functional Emotional Assessment Scale (FEAS), Circle of Communication (CoC) form, and a logbook for recording spoken new vocabulary. This research indicated that implementing DIR/Floortime principles effectively improves expressive language in a 2-year-old child with language delay.

Kata Kunci: *; early childhood; intervention; dir/floortime principles; language delay*

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Introduction

The prevalence of language delay increased during the Covid-19 pandemic due to restrictions on activities and social interactions outside the home. Research by Matsuo et.al (2024) revealed an increased risk of language development problems at the age of 18 months in children born during the Covid-19 pandemic situation. Language delay is difficulty understanding and/or using spoken, written language and/or other symbolic systems. Based on American Speech-Language-Hearing Association (ASHA), terminology "delay " is used to describe conditions where children learn at a slower rate than usual and will gradually be able to achieve abilities that match other children their age.

Language Delay occurs in around 10-15% of 2-year-old children who show an expressive vocabulary of less than 30-50 words or no word combinations (Fenson et al. 2007, Rescorla 1989 in Zambrana et al., 2014). According to the Interdisciplinary Council on Developmental and Learning Disorders: Diagnostic Manual for Infancy and Early Childhood (ICDL-DMIC), the most important language development is at the preverbal stage which involves various forms of communication that occur in the first 12-18 months of life. At this age, children can pronounce 30-50 vocabulary words and this amount of vocabulary becomes the child's modality at the next stage.

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When they are 18-24 months old, children enter the Combinations stage: Sharing Experiences Symbolically. At this time, ideally, a child should be able to say one sentence consisting of a combination of two or three words. Children with language delay at the age of 2 years have a vocabulary below the average for children their age. Language delay conditions can affect many aspects of life ranging from cognition, education, and social interactions (Dale and Patterson, 2017). Language delay can also affect a child's academic adjustment during the early school years (Tsuraya, Deliana, & Hendriyani, 2013).

By the time children are 4 years old, individual differences in language abilities become more stable. However, children who still experience language problems at this age can lead to language disorders. For this reason, handling the problem of language delay needs to be done as soon as possible in order to catch up with delays in language development before he is 4 years old.

Research shows that early intervention has a positive prognosis. Zhao et al. (2022) have proven that early intervention in children aged 1-3 years by involving parents can improve the language and communication skills of children with language delay in the city of Zunyi, China. Apart from early intervention, it is also recommended that children be given stimulation of expressive language through activities with their parents at home. Children spend much more time at home than the duration of speech therapy in the clinic. Further research by Matsuo et al. (2024) in Japan, revealed that the risk of language delay was higher in children who were at home with fewer family members (3 people) compared to children in daycare or who had family members ≥ 4 people.

One of the protective factors in the problem of delayed language development is the continuous provision of stimulation by parents (Dewi et. al, 2022). This is a challenge for the participants in this research. Mother of participant with language delay conditions needs assistance on how to stimulate their children's language development. One form of intervention that can be carried out by parents at home is the DIR/ Floortime intervention.

Based on Greenspan and Wieder (2006), the DIR/floortime intervention uses an approach that considers the development and uniqueness of the child so that it is adapted to the conditions and needs of each child. The DIR approach consists of three components: 1) Developmental (D), refers to the child's developmental capacity which is based on six levels of functional emotional milestones; 2) Individual Difference (I), refers to each child's unique way of processing sensory information and self-regulation; 3) Relationship Based (R), refers to a pattern of understanding the child's interactions and relationships with the family environment that allows the child to develop (Greenspan & Greenspan, 2010). Families play a role in providing interactions that can facilitate children to develop cognitive, social, and emotional development (Wieder & Greenspan, 2003).

Initially, the DIR/Floortime approach was developed for children with Autism Spectrum Disorder and was proven to improve communication between children with autism and mother (Isnannisa, Ezra & Boediman, Lia, 2019). Recent studies show children with other developmental disorders can benefit from the DIR/Floortime approach. For example, children with ADHD, children with language disorders, and other conditions (Greenspan & Wieder, 2006). Research was conducted on children with ADHD in Indonesia by Larasati, Ratih & Boediman, Lia & Aswanti, Mita (2017) regarding the implementation of the DIR/Floortime principles in improving the ability to focus attention in children with ADHD. Meanwhile, to implement the use of DIR/Floortime in children with language delay, further research is needed.

According to Tsakiris (2000, in ICDL-DMIC), DIR/Floortime intervention can also be given to problems of language capacity, and social-emotional functioning. This is supported by research by Jin Hee Cha and Ji Young Choi (2023) at Inha University, South Korea, which proves that Mother-Participant Language Therapy Based on DIR-Floortime has proven to be effective as an intervention for children aged 2-4 years with language delay. Research by Kasemkonsin et al. (2020) from Thailand's Mahidol University has also provided evidence that

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training using the DIR/Floortime approach can help parents, primary caregivers, and teachers create learning that encourages functional emotional development and language skills in children aged 6-7 years with language impaired.

According to the large potential for using the DIR/Floortime principles by involving mother in stimulating children's expressive language and the lack of research in Indonesia, it is necessary to conduct research on this matter. This research aims to review the effectiveness of providing coaching for mothers by applying the DIR/ Floortime principles to improve the expressive language of a 2-year-old child with language delay.

Methodology

The research design used in this intervention is Small-N Design in the form of a single case. According to Goodwin, KA, & Goodwin, CJ (2017), Small-N Design is a research design that carefully examines one. The variables examined in this study were the expressive language of 2-year-old boys, the stages of emotional functional development of the mother and child, and the mother's ability to interact with the child. The measurement methods used were observation and interviews with the Functional Emotional Assessment Scale (Greenspan, S.I., DeGangi, G., & Wieder, S., 2001), Circle of Communication (CoC) form as a guide sheet, as well as a logbook for recording children's spoken vocabulary (compiled specifically for qualitative data of this research).

The data analysis used in this research is a visual analysis of graphs (visual inspection). This method is carried out by looking at the comparison of data movements outlined in the graph, which is the change in trend during the pre-test (baseline) and post-test to see changes in CoC and functional emotional development that occurred after the intervention was given. This program is declared effective if it meets the indicators: 1) there is an increase in the communication cycle (circle of communication) at the post-test stage compared to the pre-test stage; and 2) there is an increase in the client's functional-emotional stage up to stage 5, namely representational capacity. Researchers certainly considered the qualitative indicators if there is an increase in the amount of vocabulary that children could pronounce after being given the intervention.

The participants in this study were 1 boy (initial AHA) aged 2 years 4 months and his mother, who was a client of the Praktek Kerja Profesi Psikologi (PKPP) in the Child Clinical Professional Psychology Masters study program at the University of Indonesia. Child participants have undergone a psychological examination and as a follow-up intervention is recommended. Currently, the child participant is experiencing a language delay, where he can not pronounce a combination of two or three words in one sentence with a vocabulary of around 20 words, which is below the average for children his age who generally have a minimum vocabulary of 50 words. The participant's mother is a 26 years old housewife with a bachelor's degree. The mother was chosen as the second participant because she is the main caregiver who spends most of her time together at home.

This research has received approval through a Certificate of Passing Research Ethics Review from the Research Ethics Committee of the Faculty of Psychology, University of Indonesia (Number 018/F.Psi.Komite Etik/PDP.04.00/2024 dated 23 February 2024), and also received approval through written informed consent from participants. The intervention was carried out in 8 sessions, consisting of 2 sessions of the baseline, 4 intervention phase sessions (2 psychoeducation sessions for mother and 2 roleplay intervention sessions), and 2 final assessment sessions (pre-test). Each intervention session will last 60 minutes, with a detailed explanation.

Pre-test (baseline stage)

At this stage, baseline measurements were carried out in 2 sessions (20 minutes each) by filling in the Functional Emotional Assessment Scale (FEAS) questionnaire, observing using the CoC guide, and recording the vocabulary the child could pronounce. FEAS is a rating scale

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developed by Greenspan, DeGangi, and Wieder (2001) based on the DIR principles to measure six stages of emotional functional development.

During the assessment session, the researcher asked the participant's mother to interact with the child in a free-play situation for 20 minutes x 2 sessions. The instructions given to the participant's mother were "Silakan bermain dengan anak seperti biasanya di rumah" (Greenspan & Wieder, 2006). The researcher will record the session using a camera during pre-test assessment data collection. Then, researchers will analyze the interactions between mother and child during free play situations to complete the Circle of Communication (CoC) form and the FEAS questionnaire scoring (score range 0, 1, and 2). The researcher also carried out measurements by recording the vocabulary the participants spoke during the pre-test (baseline) session.

Intervention (Psychoeducation & Roleplay)

The intervention stage is carried out by coaching the mother on how to stimulate the child's development by applying the DIR/Floortime principles to the developmental characteristics of a 2-year-old child with language delay. This intervention was given to participant children and mothers for 4 weeks, consisting of 2 psychoeducation sessions and 2 roleplay sessions followed by 2 post-test sessions.

In session 1 of Psychoeducation, the mother was given the explanation: a) The aim of providing intervention is to implement the DIR/Floortime principles in stimulating children's expressive language development; b) Principles and components of DIR/ Floortime (Do & Don't); c) Intervention implementation procedures.

Then, in session 2 of Psychoeducation the mother was given the following further explanation: a) Development of children aged 2 years, especially children's expressive language; b) Implementation of the DIR/Floortime principles in stimulating children's expressive language; c) Types of toys that can be played in DIR/Floortime session such as symbolic play or pretend play, such as playing as a chef with cooking toys, cars, and animal figures (kind of toys used following by the child's lead); d) As well as an explanation regarding filling in the logbook by the participant's mother.

Roleplays in sessions 3 and 4 consist of the following three parts: a) First 20 minutes: review with the mother regarding the DIR/Floortime approach learned previously and the targets to be achieved in the session; b) The next 20 minutes of the session are filled with play interaction activities with the child using toys chosen by the child; c) Last 20 minutes: used to provide feedback and discussions regarding the experienced.

Participants also practiced DIR/Floortime sessions at home independently and fill in the logbook provided. It was held for 2 x 20 minutes per day at the same time every day. Floortime is an activity in which adults involved with the child (mother, caregiver) are trained to effectively establish two-way communication by playing on the floor with the child for at least 20 minutes (Hess, 2013).

Post-test

The post-test was carried out a week after the last session with the same procedure as the pre-test. Apart from filling out the FEAS questionnaire and observing using the CoC sheet, the vocabulary spoken by the participants was recorded. Then, it was continued with debriefing and interviewing the mother to explore the mother's feelings and views regarding the intervention process undertaken, as well as regarding changes in interaction between mother and child, especially the participant's expressive language.

Follow up

This session was held a month later, with the same procedure as the post-test.

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Results and Discussion

Quantitative Results

Circle of Communication (CoC)

Table 1. CoC Measurement Results During Pre-test and Post-test

	Open CoC Kids		Number of Child-Mother CoC	
	Pre-test	Post-test	Pre-test	Post-test
session 1	18	40	29	51
session 2	30	34	39	50
average	24	37	34	50.5 =51
Results	There is an increase in Child's Open CoC by 54%		There is an increase in Child-Mother CoC by 50%	

Table 2. CoC Measurement Results During Intervention

Session	Open CoC Kids	Number of Child-Mother CoC
Pre-test	24	34
Intervention 1	27	38
Intervention 2	35	44
Post-test	37	51
Follow-up	42	65
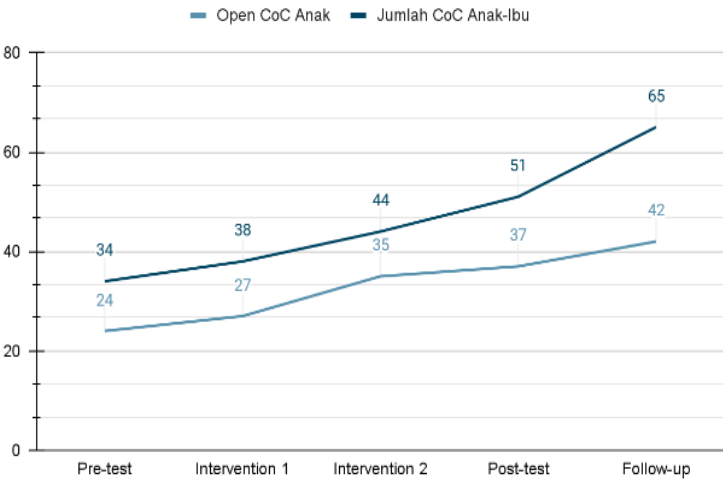
Figure 1. Graph of CoC Measurement Results During Intervention

In Table 3, it can be seen that the amount of two-way communication between child and mother (number of CoC) at the post-test stage increased by 17 circles of communication or 50% compared to the pre-test stage. The increase in circles of communication between children and mothers is in line with the increase in the number of open children. This happens because the mother follows the child's lead and responds to the child by using dir/floortime principles as suggested by the researcher; then, the child responds and becomes increasingly involved in the reciprocal pretend play interaction.

After intervention 1, the child can begin to be involved in increasingly complex communication patterns, from 1-2 to 3-5 continuous communication cycles in the post-test session with more than 50 child-mother CoC. There is an AHA learning process to establish continuous communication with mother. These results prove the hypothesis of of this research that implementing dir-floortime principles is effective in improving circles of communication between children and mothers.

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Functional Emotional Assessment Scale (FEAS)

Caregiver's FEAS*:*

Table 3. Caregiver's FEAS (Mother) Measurement Results

	FEAS Caregiver Level (Mother)	Pre-test		Post-test	
		Score	Status	Score	Status
1	Self-regulation & interest in the world	5	At risk	8	Normal
2	Forming relationships, attachment, and engagement	4	Deficient	7	Normal
3	Two-way purposeful communication	5	Deficient	10	Normal
4	Behavioral organization, problem-solving, and internalization	4	Deficient	11	At risk
5	Representational capacity	1	Deficient	6	Normal
	Total	19	Deficient	40	Normal

Table 4. Caregiver's FEAS (Mother) Measurement Results During Intervention

Session	Level 1	Level 2	Level 3	Level 4	Level 5	Total	Status
Pre-test	5	4	5	4	1	19	Deficient
Intervention 1	6	6	7	7	3	29	Deficient
Intervention 2	7	6	7	8	4	32	Deficient
Post-test	8	7	10	11	6	42	Normal
Follow-up	8	8	10	12	7	45	Normal
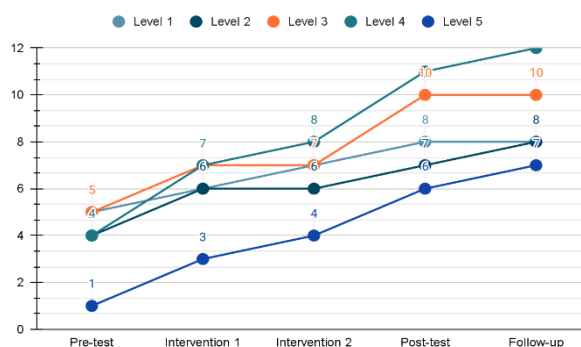
Figure 2. Graph of Caregiver's FEAS (Mother) Measurement Results During Intervention

There was an increase in Caregiver's FEAS scores at the post-test compared to the pre-test. At the pre-test, the Caregiver's FEAS score was included in the deficient category, then increased to normal after being given intervention. Mother has demonstrated good functional emotional development capacity in helping children self-regulate (level 1: normal), able to engage with children (level 2: normal), and engage in two-way communication (level 3: normal), but mother needs to improve their ability to carry out two-way communication in solving problems (level 4: at risk) although the mother can perform symbolic play and pretend to play well (level 5: normal).

The increase in Caregiver's FEAS scores happens because the mother consistently practices DIR/Floortime principles based on psychoeducation recommendations and the researcher's feedback at intervention sessions (roleplay & homework). Before intervention was given, the mother tended to play alone and could not wait for the child's response. After the intervention was given, the mother provided fun movement experiences for the children to explore, as well as began to respond and initiate reciprocal interactions with the child by imitating the activities carried out by the child in equal interactions. These results prove the hypothesis of this research that implementing dir-floortime principles is effective in improving the functional-emotional development of the caregiver.

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Children's FEAS :

Table 5. FEAS Measurement Results for Pre-test and Post-test Children

	Child's FEAS Level (2 years, 4 months)	Pre-test		Post-test	
		Score	Status	Score	Status
1	Self-regulation & interest in the world	13	Deficient	17	Normal
2	Forming relationships, attachment, and engagement	9	Deficient	15	Normal
3	Two-way purposeful communication	5	Deficient	8	Normal
4	Behavioral organization, problem-solving, and internalization	1	Deficient	2	Normal
5	Representational capacity	1	Deficient	4	Normal
	Total	30	Deficient	46	Normal

Table 4. Results of Children's FEAS Measurements During Intervention

Session	Level 1	Level 2	Level 3	Level 4	Level 5	Total	Status
Pre-test	13	9	5	1	1	30	Deficient
Intervention 1	15	10	7	2	2	36	Deficient
Intervention 2	16	13	7	2	3	41	At risk
Post-test	17	15	8	2	4	46	Normal
Follow-up	18	17	9	3	4	51	Normal
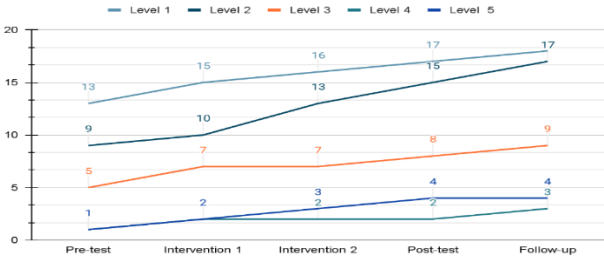
Figure 3. Graph of Results of Children's FEAS Measurements During Intervention

There is an increase in children's FEAS scores at the post-test stage compared to the pre-test stage. This can be seen in the development of child's FEAS scores which were originally deficient at pre-test and intervention stage 1, then start to increase at intervention 2 (at risk level) and then become normal at post-test session. After given intervention, the child can self-regulate (level 1: normal), increase closeness with the mother (level 2: normal), engage in two-way communication (level 3: normal), carry out two-way communication in solving problems (level 4: normal), and demonstrate capacity to perform symbolic play and pretend play (level 5: normal).

The child's functional emotional development is supported by an increase in the mother's functional emotional development capacity in interacting with her child. Before intervention was given, the mother rarely smiled, had not demonstrated a consistently warm connection, could not wait for the child's response, and talked continuously without giving the child time to respond. After intervention was given and the mother showed an increase in the mother's functional emotional development, the child showed a sense of joy when the caregiver presented an interesting game and an emotional connection when interacting with the mother. The child also often smiles and laughs happily at the pretend play activities he does with his mother. These results prove the hypothesis of this research that implementing dir-floortime principles is effective in improving the functional-emotional development of the child.

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Qualitative Results

Table 7. Development of Child's Expressive Language during Pre-test & Post-test

No	Theme	Pre-test	Post-test	Status
1	Initiation of the child to start interaction and communication	Children tend to play separately, and the mothers open/initiate more interactions.	Child initiate interactions, responding, and closing/reopening two-way communication.	Increase
2	Child's expressive language abilities	The child only made sounds without saying meaningful words.	Child says some words: ‘enak’, ‘sakit’, ‘minum’, ‘papa’, ‘dede’, ‘copot’, ‘iya’, ‘glek-glek’	Increase
3	Mother's ability to stimulate child's language abilities	Mothers play separately without responding to the child's interests and talk continuously without establishing a communication cycle.	Mothers almost always pay attention to their child's interests and tend to follow and respond to the child's initiatives, so the communication cycle is repeated up to four communication cycles.	Increase

Table 8. Development of Children's Expressive Language during Intervention

No.	Stages	The words the child says during the session	Wordcount
1	Pre-test	Children make sounds without meaningful words.	0
2	Intervention 1	‘iya’, ‘sapi’ accompanied by a smile	2
3	Intervention 2	‘iya’, ‘enak’ accompanied by smiles and laughter	2
4	Post-test	‘iya’, ‘enak’, sakit’, ‘minum’, ‘papa’, ‘dede’, ‘copot’, ‘glek-glek’ accompanied by a smile and laugh	8
5	Follow-up	‘iya’, ‘oke’, ‘biarin’, ‘duduk’, ‘papi’, ‘itu’, ‘motor’, ‘papa’, ‘hayo’, accompanied by smiles and laughter. The child also say two/three words, such as 'papa' followed by child’s name, “Ambil apa hayo?’, “Tidak boleh.”	9

Table 9. Development of Children's Expressive Language during Homework

Week	Words spoken in session at home	Words spoken outside the session	New words spoken	New vocab
1	‘iya’, ‘ndak’, ‘wah’, ‘mau’	‘lapar’, ‘minum’, ‘bismillah’, ‘amin’	‘kakak’, ‘opah’	2
2	‘iya’, ‘ndak’, ‘wah’, ‘mau’, ‘mama’, ‘babi’, ‘nyam-nyam’, ‘yuk’, ‘mana’, ‘papa’, ‘mau’	‘lapar’, ‘ayo’, ‘moo’, ‘babi’, ‘sapi’	‘ikan’, ‘ayam’, ‘dede’, ‘merah’, ‘lagi’	5
3	‘ikan’, ‘moo’, ‘ayam kukuruyuk’, ‘push’, ‘meow’, ‘yey’, ‘hore’, ‘ntan’, ‘ncik’	‘enak’, ‘lapar’, ‘no’, ‘telinga’, ‘tangan’, ‘ketek’, ‘mulut’	‘cicak di dinding’, ‘perut’, ‘kaki’, ‘jatuh’, ‘sakit’, manis’ ‘ngga ada nih’	8
Total new words spoken by children during homework assignments				15

Discussion

The intervention by applying the DIR/Floortime principles in 8 sessions, is effective to improve expressive language skills in 2-year-old child with language delay. These results can be seen from an increase in the quantity of child-mother CoCs by 50% and an increase in open CoCs for children by 54%. Also there was an increase in the number of words spoken by the child during the intervention. This includes an increase in new vocabulary spoken by children by 15 words during the homework period implementing the DIR/Floortime principles at home.

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Based on the theory of language development in Papalia, D.E., & Martorell, G. (2024), 2-year-olds children begin to be able to form sentences consisting of several important words. Further, the ICDL explained that a child needs 30-50 words of vocabulary as modality to make a sentence consisting of two or three words. After one month of intervention, the child's vocabulary increases to 35 words. Increasing a child's vocabulary will help children communicate verbally which is one indicator of expressive language (Ayu et al., 2024). This improvement allows the child to make a sentence consisting of two and three words.

Furthermore, at the age of 20-30 months the child's language syntax ability is expected to increase (Papalia & Martorell, 2024), where children can form sentences according to the rules of syntax in the language they use. For example, in this case in Indonesian, a minimum sentence consists of two words with a subject-predicate pattern (S-P) and three words with a subject-predicate-object pattern (S-P-O). Therefore the child needs to constantly increase the vocabulary in different types of words (noun, verb, adjective, conjunction). In this case most of the words that the child speaks are still nouns. Therefore, he needs to continue to practice DIR/Floortime at home with the mother.

Apart from roleplay interventions 1 and 2, mother also continued to practice DIR/Floortime at home during the three weeks of homework assignments. The mother tried to consistently apply the DIR-floortime principles when playing with their children at home. She spent around 20 minutes every time from 11.00-12.00 WIB, almost every day for three weeks. Based on the logbook that the mother filled in during the DIR-floortime session at home, the child showed an increase in new vocabulary of around 15 words over three weeks. In the first week, there were 2 words, in the second week there were 5 words, and in the third week there were 8 words. This shows that there is a consistent increase in the addition of new vocabulary as the intervention is provided. Therefore, it is necessary to practice DIR/Floortime at home even after the intervention has been completed.

The increase of a child's vocabulary is inline with the increase of CoC. At pre-test, the child rarely initiates, responds, or closes the CoC. AHA only shows 1-2 CoC occurs continuously between mother and child. At post-test after intervention, the child can initiate, respond, and close the CoC while reopening the CoC continuously. He begins to be involved in increasingly complex communication patterns until there are 3-5 continuous CoC. This improvement happens when they enjoy pretend play by using toy animal figures in a story. For example, feeding an animal and pretending to be the animal. When playing pretend play, AHA often said new vocabulary that had not previously appeared during the session. The increase of a child's vocabulary will help the development of expressive language and receptive language also (Zubaidah, 2015).

Expressive language is also seen from the improvement of children's ability to express their feelings and thoughts verbally and non-verbally. Language is a tool to interact with producing communication with sounds, words, as a means to convey thoughts and feelings (Kurniasih, E., Nurunnisa, E. C., & Husni, 2018). The increase in expressive language is in line with the increase in child’s functional emotional development. In the pre-test session, the child’s functional emotional development was classified as deficient for children his age. He rarely smiles, only speaks without saying meaningful words, and often moves away from the caregiver without initiating closeness with the caregiver. He seems to have difficulty expressing his feelings and thoughts when playing.

After being given intervention, AHA's functional emotional development began to show improvement. When the second roleplay was carried out, AHA's functional emotional development increased from deficient to at risk, then it increased to normal at the post-test session. AHA began to show a sense of joy when the caregiver presented an interesting game and showed an emotional connection when interacting with the mother. He often smiles and even laughs happily at the pretend play activities he does with his mother. Social emotional development in expressing emotions such as smiling and being cheerful is very important for a child because it is related to his ability to interact with others (Khaironi, 2018).

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The increase in a child's functional emotional development is supported by an increase in the mother's functional emotional development capacity. The acquisition of a child's first language is greatly influenced by the family environment around the child (Suardi, 2019). Before intervention was given, the mother rarely smiled, tended to play alone, diverted attention from play activities that the child was interested in, could not wait for the child's response, talked continuously without giving the child a break. This makes the interaction and communication only short in 1-2 CoC at the pre-test session.

After intervention, the mother showed an increase in functional emotional development. Mother consistently begins to respond to the child's behavior in an appropriate way and plays in the way the child wants. The mother also begins to respond and initiate reciprocal interactions with the child by imitating the activities carried out by the child in equal interactions. For example, take part in playing with cars that children like. Then, the mother responded to the child by pretending to play in a story, where the car tire was damaged and had to be repaired. Mom pretends to fix a car tire by tapping it with toy carpentry tools.

After the mother follows the child's lead and responds to the child by using DIR/Floortime principles as suggested by the researcher, then the child responds and becomes increasingly involved in the reciprocal pretend play interaction. Roleplay learning models such as pretend play are highly effective for improving children's language skills (Wantini et al., 2022). This allows the CoC to continue until 3-5 CoC, established continuously during the post-test. We can say that what mother/caregivers do with their children is important and makes a strong contribution to children's language development in the early years (Law et al., 2019).

Classical theories of Language Acquisition (Skinner 1957, dalam Papalia & Martorell, 2024) states that language is learned by a child through observation, imitation, and operant conditioning. Reinforcement is provided by caregivers. In this intervention, the mother as the caregiver gives positive reinforcement by following the child's lead, also demonstrating a consistently warm connection (including smiling and touching appropriately). Once the mother can enter and join the child's world, warm relationships can be established and the child will become more interested in initiating interactions and establishing two-way communication.

When the child's interests and ideas are used for enjoyable interactions, the child feels comfortable and becomes more involved in interacting with the mother. The child is also more likely to initiate interaction. According to Sudartinah (2023) the topic of conversation should not only be initiated by adults or parents, but also children. The mother who already understands how to stimulate children by implementing DIR/Floortime principles like that, will be able to improve her parenting skills. A mother's parenting skill is one factor that affects an early child's language development (Safitri, 2017).

Limitations and recommendations for future research

This research limitation is the small design with a single case that lacks generalizability. While this approach provides detailed insights into one participant's behavior, the findings cannot easily apply to a wider population. The unique traits and context of the individual may not represent others, which limits the study's external validity. Future research should include larger sample sizes or multiple participants to improve generalizability. Additionally, future research is recommended to include fathers as well. This broader perspective would help better understand the combined impact of both parents on children's language acquisition. Furthermore, the number of sessions should be adjusted according to the child's needs and the conditions of both parents to achieve more optimal results in improving the child's expressive language development.

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Conclusion

The findings of this study prove that coaching mothers by implementing the DIR/Floortime principles in 8 sessions is effective in improving expressive language skills of 2-year-old children with language delay. It can be said that both quantitative indicators of the success of the intervention are met. In the first indicator, there is an increase in the client's emotional-functional stage up to stage 5, which is representational capacity. The improvement of the FEAS score was successfully achieved by both mother and children so that both FEAS scores were classified as normal categories according to the child's age. The second indicator was also achieved through an increase in the communication cycle at the post-test stage compared to the pre-test stage.

To sustain these positive outcomes, it is recommended that parents continue to implement DIR/Floortime principles at home for two sessions of 20 minutes each day, thereby integrating this practice into their daily routines. Consistent application is essential for reinforcing the emotional-functional capacity acquired during the intervention. Moreover, DIR/Floortime is recommended as an adjunctive therapeutic approach for children with language delay. It could complement speech therapy by empowering the mother to stimulate the child's expressive language skills at home. Ultimately, by encouraging mother involvement in integrating DIR/Floortime principles into daily routines, practitioners can create a supportive environment that can significantly improve a child's expressive language development.

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